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Quality Engineering Test Report

SERIES: MPS-65 65W WATTS SIGLE OUTPUT SWITCHING POWER SUPPLY OPEN FRAME TYPE

SAMPLE: A.MPS-65-3.3 :3.3V/12A D.MPS-65- 12 :12V/5.2A G.MPS-65-24 :24V/2.7A
B.MPS-65- 5 :5V/12A E.MPS-65-13.5 :13.5V/4.7A H.MPS-65-27 :27V/2.4A
C.MPS-65-7.5 :7.5V/8A F. MPS-65- 15 :15V/4.2A I.MPS-65-48 :48V/1.35A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:90~264VAC O/P:FULL LOAD	B:50.1VAC~264VAC	P
2	LINE REGULATION	I/P:90~264VAC SPEC: A: ±1% O/P:FULL LOAD B: ±1% C: ±1% D: ±1% E: ±1% F: ±1% G ±1% H: ±1% I: ±1%	A: -0.00% ~ +0.00% B: -0.00% ~ +0.00% C: -0.00% ~ +0.00% D: -0.00% ~ +0.00% E: -0.00% ~ +0.00% F: +0.00% ~ +0.04% G: -0.00% ~ +0.00% H: -0.00% ~ +0.00% I: -0.00% ~ +0.01%	P
3	LOAD REGULATION	I/P:230VAC SPEC: A: ±3% O/P: B: ±3% MIN. TO FULL LOAD C: ±3% D: ±2% E: ±2% F: ±2% G: ±2% H: ±2% I: ±2%	A: -0.76% ~ +0.76% B: -0.24% ~ +0.12% C: -0.24% ~ +0.16% D: -0.1% ~ +0.1% E: -0.04% ~ +0.09% F: -0.08% ~ +0.08% G: -0.05% ~ +0.05% H: -0.02% ~ +0.02% I: -0.01% ~ +0.01%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:90~264VAC SPEC: A: ±3% O/P: B: ±3% MIN. TO FULL LOAD C: ±3% D: ±2% E: ±2% F: ±2% G:±2% H: ±2% I: ±2%	A: -1.15% ~ +0.18% B: -0.37% ~ +0.00% C: -0.49% ~ +0.00% D: -0.2% ~ +0.00% E: -0.04% ~ +0.09% F: -0.167% ~ +0.00% G: -0.16% ~ -0.05% H: -0.11% ~ -0.02% I: -0.01% ~ +0.01%	P
5	RIPPLE & NOISE	I/P:230VAC SPEC: A:80mV O/P: FULL LOAD B:100mV C:100mV D:100mV E:100mV F:100mV G:100mV H:100mV I:100mV	A: 16mV B: 30mV C: 18mV D: 18mV E: 16mV F: 14mV G: 18mV H: 16mV I: 13mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC: 0.9A O/P:FULL LOAD	B:0.729A	P

NEXT

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
7	MAX. INRUSH CURRENT	I/P:230VAC O/P:FULL LOAD SPEC: 40A	B:26.921A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC O/P:MIN. LOAD SPEC:±10% A:2.97V~3.63V B:4.5V~5.5V C:6.75V~8.25V D:10.8V~13.2V E:12.15V~14.85V F:13.5V~16.5V G:21.6V~26.4V H:24.3V~29.7V I:43.2V~52.8V	A:2.724V~4.01V B:4.173V~5.596V C:6.2V~9.00V D:10.081V~13.792V E:11.47V~16.34V F:12.2V~17.26V G:19.74V~27.29V H:22.37V~32.20V I:39.74V~54.68V	P
9	SET UP TIME	I/P:230VAC O/P:FULL LOAD SPEC:800ms	B:276.14mS	P
10	HOLD UP TIME	I/P:230VAC O/P:FULL LOAD SPEC:20mS	B:85.126mS	P
11	EFFICIENCY	I/P:230VAC O/P: FULL LOAD SPEC: A:66% B:74% C:76% D:77% E:78% F:79% G:80% H:80% I:80%	A: 69.79% B: 75.65% C: 77.47% D: 78.68% E: 79.25% F: 80.62% G: 82.89% H: 82.45% I: 83.33%	P
12	OVER LOAD PROTECTION	I/P:230VAC O/P: TESTING SPEC: A: 51~75W B: 70~105W C: 73~105W D: 73~105W E: 73~105W F: 73~105W G: 73~105W H: 73~105W I: 73~105W	A: 63.39W B: 86.51W C: 89.07W D: 88.98W E: 86.67W F: 94.95W G: 95.99W H: 90.92W I: 80.96W	P
13	OVER VOLTAGE PROTECTION	I/P:230VAC O/P:TESTING SPEC:115%~135% A : 3.795V~4.455V B : 5.75V~6.75V C : 8.625V~10.125V D : 13.8V~16.2V E : 15.525V~18.225V F : 17.25V~20.25V G : 27.6V~32.4V H : 31.05V~36.45V I : 55.2V~64.8V	A: 4.03V B: 6.18V C: 9.49V D: 15.2V E: 16.7V F: 18.4V G: 31.8V H: 33.5V I: 59.1V	P

PREVIOUS NEXT

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>TEST CONDITION / SPECIFICATION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>14</td><td>GROUND LEAKAGE CURRENT</td><td>I/P:240VAC SPEC:
L-FG--<0.3mA
N-FG--<0.3mA</td><td>B: L-FG:0.06 mA
N-FG:0.06mA</td><td>P</td></tr>
<tr><td>15</td><td>INSULATION RESISTANCE</td><td>SPEC: O/P-FG 500VDC/100MOhms MIN.
I/P-O/P 500VDC/100MOhms MIN.
I/P-FG 500VDC/100MOhms MIN.</td><td>B: O/P-FG >100MOhms
I/P-O/P >100MOhms
I/P-FG >100MOhms</td><td>P</td></tr>
<tr><td>16</td><td>DIELECTRIC / WITHSTAND VOLTAGE</td><td>SPEC: I/P- O/P: 4000VAC/ 60 sec (10mA CUT-OFF)
I/P - FG: 1500VAC/ 60 sec (10mA CUT-OFF)
O/P - FG : 500VAC/ 60sec (10mA CUT-OFF)</td><td>B: I/P-O/P :2.44mA
I/P-FG :1.539mA
O/P- FG :3.56mA</td><td>P</td></tr>
<tr><td>17</td><td>BURN-IN TEST</td><td>I/P: 230VAC O/P:FULL LOAD
TA:25°C BURN-IN DURATION : 1 hrs</td><td>B: NON BREAK</td><td>P</td></tr>
<tr><td rowspan="3">18</td><td rowspan="3">ENVIRONMENT TEST</td><td>1.LOW TEMPERATURE TEST
I/P:230VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:-7.3°C</td><td>AFTER 5.5 hrs
POWER ON OK</td><td rowspan="3">P</td></tr>
<tr><td>2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST
I/P:230VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:44.3°C</td><td>AFTER 12.5 hrs
NON BREAK</td></tr>
<tr><td>3.ACCELERATED LIFE TEST
I/P:267VAC O/P:FULL LOAD
AMBIENT TEMPERATURE: 25 °C
AMBIENT HUMIDITY: 95 %</td><td>AFTER 14.5 hrs
NON BREAK</td></tr>
<tr><td>19</td><td>TEMPERATURE RISE TEST Trise OF PARTS</td><td colspan="2">I/P :230VAC AFTER 3 hrs BURN-IN
O/P :FULL LOAD TA:31.0°C
<table>
<tr><th>POSITION</th><th>P/N</th><th>TEMP</th><th>Trise</th></tr>
<tr><td>BD1</td><td>BRIDGE DIODE</td><td>72.0°C</td><td>41°C</td></tr>
<tr><td>Q1</td><td>MAIN TRANSISTOR</td><td>83.3°C</td><td>52.3°C</td></tr>
<tr><td>T1</td><td>MAIN TRANSFORMER COIL</td><td>76.4°C</td><td>45.4°C</td></tr>
<tr><td>D40</td><td>O/P DIODE</td><td>97.9°C</td><td>66.9°C</td></tr>
<tr><td>C5</td><td>I/P FILTER CAPACITOR</td><td>86.5°C</td><td>55.5°C</td></tr>
<tr><td>C41</td><td>O/P FILTER CAPACITOR</td><td>76.6°C</td><td>45.6°C</td></tr>
<tr><td>T1</td><td>MAIN TRANSFORMER CORE</td><td>88.5°C</td><td>57.5°C</td></tr>
<tr><td>D1</td><td>CLAMP DIODE</td><td>98.6°C</td><td>67.6°C</td></tr>
<tr><td>LF1</td><td>LINE FILTER</td><td>55.3°C</td><td>24.3°C</td></tr>
</table></td><td>P</td></tr>
<tr><td>20</td><td>LIFE CYCLE</td><td colspan="2">SUPPOSE C41 IS THE MOST CRITICAL COMPONENT
I/P:230VAC O/P:FULL LOAD Ta:25°C Tc41:76.6°C Life: 47045.6 hrs
I/P:230VAC O/P:FULL LOAD Ta:40°CTc41:89.2°C Life: 17474.1 hrs</td><td>P</td></tr>
<tr><td>21</td><td>CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)</td><td colspan="3">FUSE :4A/250VAC MET
BRIDGE DIODE :D3SB60
LINE FILTER :TF-484.
TRANSFOMER :LS TF-765
POWER SWITCHER :2SK2628
OUTPUT DIODE :D83-004.
OUTPUT CAPACITOR :ELNA 1200uF/16V , 105°C, ZL
INPUT CAPACITOR :HITACHI 150uF/400V,85°C
P.C.B :MPS-65,CEM-3 2OZ SS</td></tr>
</table>

PREVIOUS NEXT

DATE	SAMPLE	TEST RESULT	TEST	PROVAL
20010605	RD SAMPLE 3.3V,5V,7.5V,12V 13.5V,24V,27V,48V	PASS	VINCENT	Max Lin
20010824	PRODUCT A107C28 3.3V,5V,7.5V,12V 13.5V,24V,27V,48V	PASS	VINCENT	Max Lin
20020411	PRODUCT A203B04 5V,12V	PASS	VINCENT	Max Lin
20020620	PRODUCT A205D03B 27V	PASS	VINCENT	Max Lin

PREVIOUS